CIRM RFA-07-01

APPLICATION # CL1- 00520-1

STAFF ANALYSIS

FEASIBILITY:

Project Scope: The project will modify space in two buildings. In one leased building, the project will expand an existing NIH-funding free hESC research center by (1) converting a storage space to an additional tissue culture training laboratory, (2) expanding the capacity of a multi-purpose classroom/conference space (3) modifying the HVAC system in several rooms to improve air filtration and address new equipment-based heat loads, (3) providing electrical improvements for new equipment, (4) reconfigure circulation space to improve security. This upgraded laboratory suite will also support a stem cell techniques course. The project also will modify a portion of an existing vivarium to provided a vivarium space dedicated to hESC research activities. The work in the vivarium involves new casework, impervious flooring and various HVAC and electrical system modifications that will provide a surgery, necropsy, procedure and animal holding rooms. The work to be accomplished in each location is well defined and economical. For example, existing wall configurations and finishes can be retained because the space is currently used for hESC work. The proposed project will address certain key objectives such as expanding tissue culture capacity, improving air distribution and addressing security concerns. The schematic plans provided in support of the project provide a clear graphical explanation of the work to be completed in each building and delinate the placement of fixed and movable equipment.

The application indicates that the proposed improvements involve a total of 3,318 gross square feet and an equivalent amount of assignable area. However, the project appears to include improvements to unassignable circulation space within the vivarium. The schematic drawings of the vivarium, however, are not scaled and therefore an assignable-to-gross area calculation could not be made. For costing purposes, the 3,318 is assumed to be entirely assignable area.

Project Management: The work to be accomplished in leased space will be undertaken consistent with usual build-to-suit practices for leased space. Thus, project management responsibilities will be shared between the institution and the leaseholder. Work in the vivarium will be managed by institutional-based facilities staff.

COST:

A budget summary listing major systems investments is provided in support of the cost estimate. Work in the shared laboratory area is budget at $205,000 for construction and the work in the vivarium is budgeted at $474,000. The institution indicates that the investment in the shared laboratory has been kept to essential building improvements in view of the fact that the space is leased and a new permanent hESC research facility

would be proposed at some time in the future. The costs for work in the vivarium is largely for upgrading of finishes, particularly providing an epoxy resin floor covering, and very minimal casework. The design fees, administrative costs and project contingency amount to $169,000 and represent 25 percent of the construction amount which is precisely at the RFA budget guidelines.

The overall cost per asf for the shared laboratory renovation work is $254. This ranges from $131/asf for the various improvements to the laboratory area to #332/asf for the vivarium space. To convert this to a comparable figure for gross square feet (gsf) in a typical research-intensive building, one would assume an overall building efficiency of assignable-to-gross area of 60 percent for laboratory space and 50 percent for vivarium space. Thus, the 1,530 asf of laboratory space equates to 2,550 gsf and the 1,788asf of vivarium space equates to 3,576 gsf when one considers the full complement of building space (e.g. the gross building area including circulation and support) constructed to support the area to be renovated. Using this calculated gross area, the cost per gsf would amount to $98/gsf for the shared laboratory space and $166/gsf for the vivarium space improvements. This provides a more meaningful comparison to new building construction costs. We conclude that the average cost for new laboratory construction would be about $600/gsf, excluding land and site utilities. This amount would vary widely within California, but is being used here as an indicator of new construction value for comparative purposes. Based on this comparison, we conclude that the laboratory renovation work represents about 16 percent of the cost of new laboratory space. New vivarium space would likely cost more than laboratory space, possibly as high as $750/gsf. The costs for the vivarium improvements represent about 22 percent of this theoretical new space value. General capital funding guidelines indicate that costs should not exceed about 65 percent of new construction in order to be considered a reasonably good investment to provide new hESC laboratory space.

The applicant indicates that the shared laboratory would be able to accommodate the NIH-free laboratory space needs for about 24 Principal Investigators (PIs). However, the space would also be used for the Stem Cell Techniques Course. No information is provided to allow an analysis of costs between these two functions. Considering only the institutional-based PIs, the cost per PI for the shared laboratory is about $35,120. Based on CIRM funding only (construction and equipment) the cost per institutional-based PIs is $76,780.

TIMELINE:

The project schedule indicates that assuming an August 1, 2007 grant award, a construction contract could be is to be awarding in January 2008 with completion planned for April 2008, eight months after award of the grant

APPLICATION # CL1- 00520-1

INSTITUTIONAL COMMITMENT:

The applicant indicates that $496,155 has been expended by the institution for renovations and equipment that would qualify for matching funds as prior expenditures as specified in the RFA. This amount represents 27 percent of the construction and equipment grant funding request, and exceeds the minimum matching requirement of 20 percent of the grant amount.

HISTORICAL PERFORMANCE:

Data for three projects, completed between September 2004 and September 2006 and ranging in cost from $523,000 to $5 million, were submitted for historical performance. The data indicate that actual project costs were exactly as budgeted in two cases and were slightly below the budget in the third case. Project completion was very close to the scheduled completion, ranging between 7 days and 30 days later than planned to were very close to the original budgets, and actual scheduled completion dates were one or two months later than the original scheduled completion. The number of change orders noted ranged from two to seven for these prior projects.

The applicant indicates that there had been one laboratory renovation project (in the cost range of $1 million to $5 million) undertaken in the last two years with a value of $1.2 million.

RESPONSIVENESS:

Shared Laboratory: The applicant has been operating a successful shared research laboratory for some time, and the requested grant funds should result in additional capacity to serve this institution and the researchers from surrounding institutions that have already been able to use the shared laboratory.

We would note, however, the the shared laboratory is located in leased space that has a term that began in April 2006 and is scheduled to expire in 2009. While the institution indicates that it has plans to construct additional permanent owned space to house the hESC research program, it will nevertheless continue to use the leased space to meet a portion of its space needs.

If the Facilities Working Group approves this grant request for funding, it should be with the condition that the existing lease be extended to at least five years so that the CIRM funded capital investments are amortized over a reasonable period of time. IN the absence of a firm extension of the lease term, CIRM may want to consider a condition that would allow the institution to refund a portion of the CIRM grant funds being spent in leased space in the event the lease is not extended.

APPLICATION # CL1- 00520-1

Techniques Course: The applicant has requested funding under Part 1 for operation of a shared research laboratory and a techniques course. The Part 2 application addresses only renovations for the shared research laboratory which will also be used to accommodate the techniques course. Therefore, no specific information is available.

Facilities Working Group Issues

- **Responsiveness (Lease Space Term)—**How will the Facilities Working Group address the fact that a portion of the planned investment is in leased space that has a term that is to expire in three years?
- **Matching Funds** – How will the FWG address the issue that all matching funds for the Shared Lab and Techniques Courses is from prior expenditures

The grant management office will need to confirm that all conditions of the grant as indicated in the Grants Administration Policy have been met. This would include confirming that all past work is consistent with grant requirements for prevailing wage and other construction-related requirements. This includes confirmation that equipment funds are budgeted pursuant the Grants Administration Policy as adopted December 7, 2006.